Please type a plus sign (+) inside this box [redacted]

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC173 JUN 20 2001 PATENT & TRADEMARK OFFICE

OIPE JC173 JUN 20 2001 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 8

Complete if Known	
Application Number	09/715,532
Filing Date	11/16/2000
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

RECEIVED JUN 25 2001 Technology Center 2600

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MGM		3771037		Bailey	11/1973	
		4733214		Andersen	3/1988	
		5103404		McIntosh	4/1992	
		5189355		Larkins	2/1993	
MGM		5203563		Loper	4/1993	motorized feedback

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MGM		DE	4013227		Poulsom et al	5/1991	motorized feedback	

Examiner Signature	Michael J. Mey	Date Considered	12/10/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC#73
JUN 20 2001
PATENT & TRADEMARK OFFICE

RECEIVED
JUN 25 2001
Technology Center 2600

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 8

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
mjn		IBM TECHNICAL DISCLOSURE BULLETIN pp230-235 Feb. 1990 Mouse Ball-Actuating Device With Force And Tactile Feedback	
mjn		RESEARCH DISCLOSURE November 1987 28373 Joystick with Tactile Feedback	

Examiner Signature	Michael J. Mayer	Date Considered	12/10/01

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 8

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OIPE JC13 JUN 20 2002 PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MJM		5565891		Armstrong	10/1996	
		5589828		Armstrong	12/1996	
		5999084		Armstrong	12/1999	
		6102802		Armstrong	8/2000	
		6135886		Armstrong	10/2000	
		6198473		Armstrong	3/2001	
		6208271		Armstrong	3/2001	
		6222525		Armstrong	4/2001	
		3611068		Fujita	10/1971	
		3806471		Mitchell	4/1974	
		3952173		Tsuji	4/1976	
		3988556		Hyodo	10/1976	
		4224602		Anderson	9/1980	
		4313113		Thornburg	1/1982	
		4315238		Eventoff	2/1982	
		4552360		Bromley	11/1985	
		4673919		Kataoka	6/1987	
		4786895		Castaneda	11/1988	
		4866542		Shimada	9/1989	
MJM		5164697		Kramer	11/1992	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MJM			wo9532776		Namco	12/1995		
			ep1080753		Namco	3/2001		
			jp6154422		Namco	6/1994		
			jp9218737		Namco	8/1997		
			ep1080753		Namco	6/2001		
			ep0337458		Namco	10/1989		
			ep0337458		Namco	10/1989		
			jp7281824		Namco	10/1995		
			ep0470615		Nintendo	2/1992		
MJM			ep0579448		Texas Instruments	1/1994		

Examiner Signature	Michael J. Marr	Date Considered	12/6/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box []

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

JUN 20 2001 JC745 TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 8

Complete If Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

RECEIVED JUN 25 2001 Technology Center 2600

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MJM		5200597		Eastman	4/1993	
		5207426		Inoue	5/1993	
		5287089		Parsons	2/1994	
		5311779		Teruo	5/1994	
		5315204		Park	5/1994	
		5364108		Esnouf	11/1994	
		5365494		Lynch	11/1994	
		5376913		Pine	12/1994	
		5396235		Maeshima	3/1995	
		5440237		Brown	8/1995	
		5457478		Frank	10/1995	
		5640566		Victor	6/1997	
		5670955		Thorne	9/1997	
		5673237		Blank	9/1997	
		5675329		Barker	10/1997	
		5689285		Asher	11/1997	
		5764219		Rutledge	6/1998	
		5778404		Capps	7/1998	
		5790102		Nassimà	8/1998	
MJM		5847305		Yoshikawa	12/1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MJM			DE3031484		Gurndig	11/1982		
			DE3543890		Thomson-Brant	6/1987		
			GB2113920		Alps Electric	8/1983		
			GB058462		Shin-Etsu Polymer	1/1981		
MJM			WO9957630		Schneider	11/1999		

Examiner Signature	Michael J. Murray	Date Considered	12/6/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC13 JUN 20 2001 PATENT & TRADEMARK OFFICE

RECEIVED JUN 25 2001 Technology Center 2600

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 8

Complete If Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MM		5854624		Grant	12/1998	
		5883619		Ho	3/1999	
		5889236		Gillespie	3/1999	
		5895471		King	4/1999	
		5948066		Whalen	9/1999	
		5910798		Kim	6/1999	
		5943044		Martinelli	8/1999	
		5974238		Chase	10/1999	
		5995026		Sellers	11/1999	
		6020884		MacNaughton	2/2000	
		6049812		Bertram	4/2000	
		6118979		Powell	9/2000	
		6157935		Tran	12/2000	
		6185158		Ito	2/2001	
MM		Des.342740		Parker	12/1993	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	Michael J Mayer	Date Considered	12/10/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC13 JUN 20 2001 PATENT & TRADEMARK OFFICE

RECEIVED JUN 25 2001 Technology Center 2600

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 6 of 8

Complete If Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
MJ		Vol. 20 No. 5 Oct. 1977 S.F. KAMBIC, IBM Technical Disclosure Bulletin,	
		Questel-Orbit QWEB Pages 1-24 (submitted herewith)	

Examiner Signature	Michael J. Mayer	Date Considered	12/06/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PATENT & TRADEMARK OFFICE JUN 20 2001 JC548

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 7 of 8

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

RECEIVED JUN 25 2001 Technology Center 2600

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		THE BELOW LISTED DISCLOSURES FROM Questel-Orbit QWEB 1-24 pages (hereto attached)				
mm		5898359		~~Delco~~ Ellis 4	1999	
		5550339		~~CTS Corp.~~ Haugh 8	1996	
		5847639		~~Interlink~~ Yanagi 12	1998	
		5867808		~~IBM~~ Kamentser 2	1999	
		5287089		~~Parsons~~ PARSONS 3	1994	
		5132658		~~Semsym~~ Duenbaier 7	1992	
		5196782		~~Luntron~~ POWEN	~~1991~~ 3/1993	
		4975676		~~Spectra~~ Greenhalgh 12	1990	
		4694231		~~Alvite~~ Joseph 9	1987	
		4615252		~~Asahi~~ Asahi 10	1986	
		4301337		Eventoff 11	1981	
		4314228		Eventoff 2	1982	
		4315238		Eventoff 2	1982	
		4268815		Eventoff 3	1981	
mm		4276538		Eventoff 6	1981	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
mm			jp11031606		Teikoku 2	/1999		
			jp09223607		Teikoku 8	/1997		
			jp09213168		Teikoku 8	/1997		
			DE19606408		Contelec 8	/1997		
			GB2308448		Samsung 6	/1997		
			RU2010369		Smyslov 3	/1994		
			GB2267392		Collins 12	/1993		
			jp05151828		Yokohama 6	/1993		
			jp04155707		Yokohama 5	/1992		
mm			jp03108701		Canon 5	/1991		

Questel-Orbit data continued on next sheet

Examiner Signature		Date Considered	1/16/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PATENT & TRADEMARK OFFICE JUN 20 2001

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 8 of 8

Complete If Known	
Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

RECEIVED JUN 25 2001 Technology Center 2600

Questel-Orbit continuation

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MJ			GB2233499		Mitsubishi	1/1991		
			DE4019211		Lutron	1/1991		
			jp 02158105		Yokohama	6/1990		
			DE3634912		Link	4/1988		
			jp62160623		Yamatake	7/1987		
MJ			jp601 75401		Asahi	9/1985		

Examiner Signature		Date Considered	12/15/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

#3

Please type a plus sign (+) inside this box → ☐

OIPE

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

PATENT AND TRADEMARK OFFICE
AUG 0 8 2001
103

Complete If Known	
Application Number	09/715,532
Filing Date	11/16/2000
First Named Inventor	Brad A. Armstrong
Group Art Unit	2673
Examiner Name	
Attorney Docket Number	30

7/27/02 + IDS filed 8/1/02 by Applicant's Mgr

RECEIVED
AUG 14 2001
Technology Center 2600

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MNh		JP	JP7302159		SEGA Enterp LTD	1995	generally all	
MNh		JP	5-87760		MITSUMI ELECTRIC	Nov. 1993,	generally all	

Examiner Signature		Date Considered	12/12/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

#16

Please type a plus sign (+) inside this box []

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC556 JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 10

Complete If Known	
Application Number	09/715,532
Filing Date	11/16/00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

RECEIVED JUL 23 2002 Technology Center 2600

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
mm		5200597		Eastman	1993	generally all
		5207426		Inoue	1993	" "
		5287089		Parsons	1994	" "
		5311779		Teruo	1994	"
		5315204		Park	1994	" "
		5364108		Esnouf	1994	"
		5365494		Lynch	1994	"
		5376913		Pine	1994	"
		5396235		Maeshima	1995	" "
		5440237		Brown	1995	" "
		5457478		Frank	1995	" "
		5640566		Victor	1997	" "
		5670955		Thorne	1997	" "
		5673237		Blank	1997	" "
		5675329		Barker	1997	" "
		5689285		Asher	1997	" "
		5764219		Rutledge	1998	" "
		5778404		Capps	1998	" "
		5790102		Nassima	1998	" "
mm		5847305		Yoshikawa	1998	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
mm		DE	3031484		Gurndig	1982	generally all	
		DE	3543890		Thomson-Brant	1987	" "	
		GB	2113920		Alps Electric	1983	" "	
		GF	2058462		Shin-Etsu Polymer	1981	" "	
		WO	9957630		Schneider	1999	" "	
mm		JP	5-87760		Mitsumi Electric	3/1993	" "	
		JP	7302159		Sega Enterprise	11/1995	" "	
		EP	0470615		Nintendo Co.	2/1992	" "	
		0	470 615 A1		Nintendo Co.	2/1992	" "	
mm		DE	4013227		Poulsom	5/1991	" "	

Examiner Signature		Date Considered	12/10/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JC588 JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 10

Complete if Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

dup'd to a IDS filed 6/26/02 pg 3/8 10/31/02 MM

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
mm		5565891		Armstrong	1996	generally all
		5589828		Armstrong	1996	" "
		5999084		Armstrong	1999	" "
		6102802		Armstrong	2000	" "
		6135886		Armstrong	2000	" "
		6198473		Armstrong	2001	" "
		6208271		Armstrong	2001	" "
		6222525		Armstrong	2001	" "
		3611068		Fujita	1971	" "
		3806471		Mitchell	1974	" "
		3952173		Tsuji	1976	" "
		3988556		Hyodo	1976	" "
		4224602		Anderson	1980	" "
		4313113		Thornburg	1982	" "
		4315238		Eventoff	1982	" "
		4552360		Bromley	1985	" "
		4673919		Kataoka	1987	" "
		4786895		Castaneda	1988	" "
		4866542		Shimada	1989	" "
mm		5164697		Kramer	1992	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
mm			wo9532776		Namco	1995	generally all	1
			ep1080753		Namco	2001	" "	
			jp6154422		Namco	1994	" "	
			jp9218737		Namco	1997	" "	
			ep1080753		Namco	2001	" "	
			ep0337458		Namco	1989	" "	
			ep0337458		Namco	1989	" "	
			jp7281824		Namco	1995	" "	
			ep0470615		Nintendo	1992	" "	
mm			ep0579448		Texas Instruments	1994	" "	

Examiner Signature	Michael J. Mayo	Date Considered	12/16/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 10

Complete If Known	
Application Number	09/715,532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MP		5854624		Grant	1998	generally all
		5883619		Ho	1999	" "
		5889236		Gillespie	1999	" "
		5895471		King	1999	" "
		5948066		Whalen	1999	" "
		5910798		Kim	1999	" "
		5943044		Martinelli	1999	" "
		5974238		Chase	1999	" "
		5995026		Sellers	1999	" "
		6020884		MacNaughton	2000	" "
		6049812		Bertram	2000	" "
		6118979		Powell	2000	" "
		6157935		Tran	2000	" "
		6185158		Ito	2001	" "
		Des. 342740		Parker	1993	" "
		5510812		O'Mara	1996	" "
		4246452		Chandler	1981	" "
MP		4469330		Asher	1984	" "

11 SHEETS

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	Michael Mayo	Date Considered	12/16/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 10

Complete if Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

dup Cited by TDs 6/26/01 RG 7/18 mgr

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		THE BELOW LISTED DISCLOSURES FROM Questel-Orbit QWEB 1-24 pages				(hereto attached)
mgr		5898359		Delco	1999	generally all
		5550339		CTS Corp.	1996	" "
		5847639		Interlink	1998	" "
		5867808		IBM	1999	" "
		5287089		Parsons	1994	" "
		5132658		Semsym INC.	1992	" "
		5196782		Luntron	1991	" "
		4975676		Spectra	1990	" "
		4694231		Alvite	1987	" "
		4615252		Asahi	1986	" "
		4301337		Eventoff	1981	" "
		4314228		Eventoff	1982	" "
		4315238		Eventoff	1982	" "
		4268815		Eventoff	1981	" "
mgr		4276538		Eventoff	1981	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
mgr			jp11031606		Teikoku	1999	generally all	
			jp09223607		Teikoku	1997	"	"
			jp09213168		Teikoku	1997	"	"
			DE19606408		Contelec	1997	"	"
			GB2308448		Samsung	1997	"	"
			RU2010369		Smyslov	1994	"	"
			GB2267392		Collins	1993	"	"
			jp05151828		Yokohama	1993	"	"
			jp04155707		Yokohama	1992	"	"
mgr			jp03108701		Canon	1991	"	"

Questel-Orbit data continued on next sheet

Examiner Signature	Mark J. Murphy	Date Considered	10/10/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 10

Complete If Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OIPE JC58 JUL 19 2002 PATENT & TRADEMARK OFFICE

Questel-Orbit continuation

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

Duplicate of IDS filed on 12/26/01 by MPA

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MPA			GB2233499		Mitsubishi	1991	generally all	
			DE4019211		Lutron	1991	" "	
			jp 02158105		Yokohama	1990	" "	
			DE3634912		Link	1988	" "	
			jp62160623		Yamatake	1987	" "	
MPA			jp601 75401		Asahi	1985	" "	

Examiner Signature	Michael J. Mayo	Date Considered	12/16/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 6 of 10

Complete If Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MM		3771037		Bailey	1973	generally all
		4733214		Andersen	1988	"
		5103404		McIntosh	1992	"
		5189355		Larkins	1993	"
MM		5203563		Loper	1993	"

duplicate 12/6/02 MM

to IDS filed 6/11/01 pg 1 of 8

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	MM	Date Considered	12/6/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 7 of 10

Complete if Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
MA		Vol. 20 No. 5 Oct. 1977 S.F. KAMBIC, IBM Technical Disclosure Bulletin, (generally all)	
		Questel-Orbit QWEB Pages 1-24 (submitted herewith) (generally all is relevant)	

duplicate to PTO 6/26/01 Rejected MA 12/6/01

Examiner Signature	Michael J. Mayo	Date Considered	12/6/01

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 8 of 10

Complete if Known	
Application Number	09/715,532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
MM		IBM TECHNICAL DISCLOSURE BULLETIN pp230-235 Feb. 1990 Mouse Ball-Actuating Device With Force And Tactile Feedback (generally all relevant)	
MM		RESEARCH DISCLOSURE November 1987 28373 Joystick with Tactile Feedback (generally all relevant)	

Refiled IDS filed 6/21/07 pg 2/8

Examiner Signature: Michael J. Mayer Date Considered: 12/18/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

OIPE JUL 19 2002 PATENT & TRADEMARK OFFICE

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 9 of 10

Complete if Known	
Application Number	09/715532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number - Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MM		US-5510812	1996	O'Mara	Generally all
		US-4469330 9	1984	Asher	generally all
		US-4246452 1	1981	Chandler	generally all
		US-5565891 10	1996	Armstrong	generally all
		US-D355901 2	1995	Bradley	generally all
		US-4555960 12	1985	King	generally all
		US-4924216 5	1990	Leung	generally all
		US-4933670 6	1990	Wislocki	generally all
		US-5065146 9	1991	Garrett	generally all
		US-5128671 7	1992	Thomas, Jr.	generally all
		US-5237311 8	1993	Wislocki	generally all
		US-5293158 3	1994	Soma	generally all
		US-5298919 3	1994	Chang	generally all
		US-5329276 7	1994	Hirabayashi	generally all
		US-2430284 11	1947	Evers	generally all
		US-3693425 9	1972	Starita et al	generally all
		US-3921445 11	1975	Hill et al	generally all
		US-4099409 7	1978	Edmond	generally all
		US-4216467 8	1980	Colston	generally all
MM		US-4297542 10	1981	Shumway	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] -Number[4] - Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MM		5-87760 (Japan)	12/1993	Mitsumi Elec.	generally all	
		7-302159 (Japan)	11/1995	Sega Enter.	generally all	
		0 470 615 A1 (EP)	2/1992	Nintendo	generally all	
		0205726 (EP)	12/1986	Hal Lab INC	generally all	
		739505 (SU)	6/1980 1977	Baranov	generally all	
		2205941 (GB)	12/1988	Garrett	generally all	
MM		2240614 (GB)	8/1991	Dzholdasbekov	generally all	

Examiner Signature		Date Considered	12/05/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

OIPE
JUL 19 2002
PATENT & TRADEMARK OFFICE
JUC588

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 10 of 10

Complete if Known	
Application Number	09/715,532
Filing Date	11-16-00
First Named Inventor	Brad A. Armstrong
Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number - Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
MJA		US-4348142 9	1982	Figour	generally all
		US-4369663 1	1983	Venturello etal	generally all
		US-4414537 11	1983	Grimes	" "
		US-4536746 8	1985	Gobeli	" "
		US-4555960 12	1985	King	" "
		US-4670743 6	1987	Zemke	" "
		US-4684089 8	1987	van der Lely	" "
		US-4811608 3	1989	Hilton	" "
		US-4855704 8	1989	Betz	" "
		US-4910503 3	1990	Broadsky	" "
		US-4935728 6	1990	Kley	" "
		US-5128671 7	1992	Thomas, Jr.	" "
		US-5142931 9	1992	Menahem	" "
		US-5168221 12	1992	Houston	" "
		US-5189355 2	1993	Larkins et al	" "
		US-5252952 10	1993	Frank et al	" "
MJA		US-5329276 7	1994	Hirabayashi	" "
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
MJA		0205726 (EP) 12	1986		generally all	
		739505 (SU)	~~1979~~ 6/1980		generally all	
		2205941 (GB) 12	1988		generally all	
MJA		2240614 (GB) 8	1991		generally all	

Examiner Signature	Michael J. Mayo	Date Considered	11/6/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.